WE CLAIM:

1. A dynamic magnet system, comprising:

a support structure,

a plurality of magnets oriented in polar opposition to move relative to said support structure, and

ferrofluid bearings between said magnets and said support structure to provide low friction interfaces.

2. The dynamic magnet system of claim 1, said ferrofluid bearings establishing static coefficients of friction between said magnets and said support structure less than about 0.02.

3. The dynamic magnet system of claim 2, said ferrofluid having a viscosity less than 10 centipoise.

4. The dynamic magnet system of claim 2, said ferrofluid comprising a light mineral oil medium mixed with isoparaffinic acid.

5. The dynamic magnet system of claim 1, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical current in said conductor.

6. The dynamic magnet system of claim 5, said conductor comprising at least one coil wound on said support structure, said support structure being nonconductive.

7. The dynamic magnet system of claim 5, further comprising an operating system powered by said current.

8. The dynamic magnet system of claim 1, further comprising a pair of end magnets limiting the travel of said moving magnets, said end magnets oriented in polar opposition to the nearest respective moving magnets.

9. The dynamic magnet system of claim 1, said magnets having multiple oscillation modes relative to said support structure.

10. The dynamic magnet system of claim 1, said support structure orienting said magnets for movement in a primarily horizontal direction.

11. A dynamic magnet system, comprising:

a support structure, and

a plurality of magnets oriented in polar opposition to move relative to said support structure,

wherein said system has a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

12. The dynamic magnet system of claim 11, wherein said critical angle is less than 10 minutes.

13. The dynamic magnet system of claim 11, said magnets having multiple oscillation modes relative to said support structure.

14. An energy harvester, comprising:

a support structure,

a plurality of magnets oriented in polar opposition to oscillate relative to said support structure in multiple oscillation modes,

respective bearings establishing static coefficients of friction between said magnets and said support structure less the 0.02, and

a conductor oriented with respect to said support structure and magnets so that oscillation of said magnets in response to a movement of said support structure induces an electrical signal in said conductor.

15. The energy harvester of claim 14, said conductor comprising at least one coil wound on said support structure, said support structure being nonconductive.

16. The energy harvester of claim 14, said bearings comprising a ferrofluid.

17. The energy harvester of claim 16, said ferrofluid having a viscosity less than 10 centipoise.

18. The energy harvester of claim 16, said ferrofluid comprising a light mineral oil medium mixed with isoparaffinic acid.

19. The energy harvester of claim 14, further comprising a pair of end magnets limiting the travel of said oscillating magnets, said end magnets oriented in polar opposition to the nearest respective oscillating magnets.

20. The energy harvester of claim 14, said support structure orienting said magnets for movement in a primarily horizontal direction.

21. The energy harvester of claim 14, further comprising an operating system powered by said current.

22. An energy harvester, comprising:

a support structure,

a plurality of magnets within said enclosure oriented in polar opposition to oscillate relative to said support structure in multiple oscillation modes, and

a conductor oriented with respect to said support structure and magnets so that oscillation of said magnets in response to a movement of said support structure induces an electrical signal in said conductor,

wherein said energy harvester has a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

23. The energy harvester of claim 22, wherein said critical angle is less than 10 minutes.

24. A dynamic magnet system, comprising:

a support structure, and

an even number of magnets oriented in polar opposition to individually move relative to said support structure along a common axis.

25. The dynamic magnet system of claim 24, further comprising a pair of end magnets along said axis limiting the travel of said moving magnets, said end magnets oriented in polar opposition to the nearest respective moving magnets.

26. The dynamic magnet system of claim 24, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

27. The dynamic magnet system of claim 26, said conductor comprising at least one coil wound on said support structure, said support structure being nonconductive.

28. The dynamic magnet system of claim 26, further comprising an operating system powered by said signal.

29. The dynamic magnet system of claim 24, said support structure orienting said magnets for movement in a primarily horizontal direction.

30. The dynamic magnet system of claim 24, further comprising ultra low friction bearings establishing static coefficients of friction between said magnets and said support structure less than about 0.02.

31. The dynamic magnet system of claim 30, said bearings comprising a ferrofluid.

32. The dynamic magnet system of claim 31, said ferrofluid having a viscosity less than 10 centipoise.

33. The dynamic magnet system of claim 31, said ferrofluid comprising a light mineral oil medium mixed with isoparaffinic acid.

34. The dynamic magnet system of claims 24, said magnets having multiple oscillation modes relative to said support structure.

35. The dynamic magnet system of claim 24, wherein said system has a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

36. A dynamic magnet system, comprising:

a support structure,

a plurality of magnets oriented in polar opposition to move relative to said support structure, and

respective bearings establishing ultra low static coefficients of friction less than 0.02 between said magnets and said support structure,

said support structure orienting said magnets for primarily horizontal movement.

37. The dynamic magnet system of claim 36, said magnets having multiple oscillation modes relative to said support structure.

38. The dynamic magnet system of claim 36, said bearings comprising a ferrofluid.

39. The dynamic magnet systems of claim 38, said ferrofluid having a viscosity less than 10 centipoise.

40. The dynamic magnet system of claim 38, said ferrofluid comprising a light mineral oil medium mixed with isoparaffinic acid.

41. The dynamic magnet system of claim 36, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

42. The dynamic magnet system of claim 41, said conductor comprising at least one coil wound on said support structure, said support structure being nonconductive.

43. The dynamic magnet systems of claim 41, further comprising an operating system powered by said signal.

44. The dynamic magnet system of claim 36, further comprising a pair of end magnets limiting the travel of said moving magnets, said end magnets oriented in polar opposition to the nearest respective moving magnets.

45. A dynamic magnet system, comprising:

a support structure, and

a plurality of magnets oriented in polar opposition to move relative to said support structure,

said support structure orienting said magnets for primarily horizontal movement,

wherein said system has a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

46. The dynamic magnet system of claim 45, wherein said critical angle is less than 10 minutes.

47. The dynamic magnet system of claim 45, said magnets having multiple oscillation modes relative to said support structure.

48. The dynamic magnet system of claim 45, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

49. The dynamic magnet system of claim 48, further comprising an operating system powered by said signal.

50. A dynamic magnet system, comprising:

a support structure having a ring-shaped axis, and

at least one magnet oriented in polar opposition to move along said axis in response to movements of said support structure.

51. The dynamic magnet system of claim 50, further comprising respective bearings establishing static coef-

ficients of friction between said magnets and said support structure less than about 0.02.

52. The dynamic magnet system of claim 51, said bearings comprising a ferrofluid.

53. The dynamic magnet system of claim 52, said ferrofluid having a viscosity less than 10 centipoise.

54. The dynamic magnet system of claim 52, said ferrofluid comprising a light mineral oil medium mixed with isoparaffinic acid.

55. The dynamic magnet system of claim 50, said support structure orienting said magnets for movement in a primarily horizontal direction.

56. The dynamic magnet system of claim 50, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical current in said conductor.

57. The dynamic magnet systems of claim 56, said conductor comprising at least one coil wound on said support structure, said support structure being nonconductive.

58. The dynamic magnet system of claim 56, further comprising an operating system powered by said current.

59. The dynamic magnet system of claim 50, wherein said system has a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

60. The dynamic magnet system of claim 59, wherein said critical angle is less than 10 minutes.